WHAT IS CLAIMED IS:

1.   An image processing apparatus comprising:

first extracting means for extracting a first image characteristic amount from an image;

second extracting means for extracting a second image characteristic amount from said image;

judging means for judging similarity between the first image characteristic amount extracted by said first extracting means and the second image characteristic amount extracted by said second extracting means; and

selecting means for selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result of said judging means.

2.   An image processing apparatus according to claim 1, wherein, if said judging means judges that the image characteristic amounts are similar to each other, said selecting means selects the image character amount having a smaller data amount among the first and second image characteristic amounts, and, if said judging means judges that the image characteristic amounts are not similar to each other, said selecting means selects the image characteristic amount having a greater data amount among the first and second image characteristic

amounts.

3.   An image processing apparatus according to claim 1, wherein the image character amount is obtained by scaling the image and by effecting DCT processing and quantization processing on the scaled image and by extracting several coefficients among coefficients obtained by a processing result from a low frequency component side.

4.   An image processing apparatus according to claim 3, wherein said first and second extracting means extract different numbers of coefficients from each other.

5.   An image processing apparatus comprising:

DCT processing means for effecting DCT processing of an image;

quantization means for effecting quantization of data subjected to the DCT processing by said DCT processing means;

coefficient selecting means for selecting the number of quantization DCT coefficients to be extracted among the quantization DCT coefficients subjected to the quantization by said quantization means, in accordance with an original image; and

setting means for setting the number of

quantization DCT coefficients selected by said

coefficient selecting means as an image characteristic

amount.

5   6. An image processing apparatus according to

claim 5, wherein the image has 8 × 8 pixels and is

represented by Y/Cb/Cr color space.

           7. An image processing apparatus according to

10   claim 6, wherein the image having 8 × 8 pixels is

obtained by scaling-down the original image and by

converting it into Y/Cb/Cr color space data if

necessary.

15   8. An image processing apparatus according to

claim 5, further comprising extracting means for

extracting several quantization DCT coefficients from a

low frequency component side on the basis of the

quantization DCT coefficients selected by said

20   coefficient selecting means.

           9. An image processing apparatus according to

claim 5, wherein the image is a still image or a frame

image having moving image data, and said selecting

25   means selects the number of quantization DCT

coefficients in accordance with the fact that the

original image is the still image or the fact that the

original image is the frame image having moving image
data.

10. An image processing apparatus according to
claim 5, wherein the quantization DCT coefficients of
Y/Cb/Cr components are re-arranged by zigzag scanning,
and, when the original image is a still image, six
quantization DCT coefficients of Y/Cb/Cr components are
selected, respectively, from a low frequency component
side, and, when the original image is a moving image,
six quantization DCT coefficients of a Y component are
selected and three quantization DCT coefficients of
Cb/Cr components are selected, respectively, from a low
frequency component side.

11. An image processing apparatus according to
claim 5, further comprising image inputting means
capable of inputting both still image data and moving
image data, and judging means for judging whether the
image inputted in accordance with an image input mode
is a still image or a frame image having the moving
image data.

12. An image processing apparatus according to
claim 11, wherein said image inputting means capable of
inputting both still image data and moving image data
is a digital video device capable of effecting still

image sensing, and the number of quantization DCT coefficients to be selected is determined by in synchronous with an image sensing mode of said digital video device.

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13. An image processing apparatus according to claim 11, wherein MINE TYPE of data including the original image judges whether the original image has still image data or moving image data.

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14. An image processing apparatus according to claim 11, wherein extension of a file number of data including the original image judges whether the original image has still image data or moving image

15   data.

15. An image processing apparatus according to claim 5, wherein two candidates are prepared as the number of quantization DCT coefficients in said
20   selecting means, and one is selected among them, and similarity between first image characteristic amount data associated with the smaller number of quantization DCT coefficients and second image characteristic amount data associated with the greater number of quantization
25   DCT coefficients is judged, and one of the first image characteristic amount data and the second image characteristic amount data associated with the greater

number of quantization DCT coefficients is selected in accordance with a comparison result between a similarity value and a predetermined threshold value.

5   16. An image processing apparatus according to claim 15, wherein, when the similarity between the first image characteristic amount data and the second image characteristic amount data is judged, judgement of similarity is effected by supplementing a

10   predetermined value as data of a coefficient portion which is not included in the first image characteristic amount data having smaller number of coefficients but is included in the second image characteristic amount data having greater number of coefficients to the first

15   image characteristic amount data.

17. An image processing apparatus according to claim 16, wherein the predetermined value is 16 which is the number of quantization DCT coefficients.

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18. An image processing apparatus according to claim 16, wherein the predetermined value is a value which means that the DCT coefficient is zero.

25   19. An image processing method comprising:

a first extracting step for extracting a first image characteristic amount from an image;

a second extracting step for extracting a second
image characteristic amount from said image;

a judging step for judging similarity between the
first image characteristic amount extracted by said

5   first extracting step and the second image
characteristic amount extracted by said second
extracting step; and

a selecting step for selecting either the first
image characteristic amount or the second image

10   characteristic amount as a characteristic amount of the
image in accordance with a judging result of said
judging step.

20. An image processing method according to claim

15   19, if said judging step judges that the image
characteristic amounts are similar to each other, said
selecting step selects the image character amount
having a smaller data amount among the first and second
image characteristic amounts, and, if said judging step

20   judges that the image characteristic amounts are not
similar to each other, said selecting step selects the
image character amount having a greater data amount
among the first and second image characteristic
amounts.

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21. An image processing method according to claim
19, wherein the image character amount is obtained by

scaling the image and by effecting DCT processing and quantization processing on the scaled image and by extracting several coefficients among coefficients obtained by a processing result from a low frequency

5   component side.

       22.   An image processing method according to claim 21, wherein said first and second extracting steps extract different numbers of coefficients from each

10   other.

       23.   An image processing method comprising:

       a DCT processing step for effecting DCT processing of an image;

15   a quantization step for effecting quantization of data subjected to the DCT processing by said DCT processing step;

       a coefficient selecting step for selecting the number of quantization DCT coefficients to be extracted

20   among the quantization DCT coefficients subjected to the quantization by said quantization step, in accordance with an original image; and

       a setting step for setting the number of quantization DCT coefficients selected by said

25   coefficient selecting step as an image characteristic amount.

24. An image processing method according to claim 23, wherein the image has 8 x 8 pixels and is represented by Y/Cb/Cr color space.

5   25. An image processing method according to claim 24, wherein the image having 8 x 8 pixels is obtained by scaling-down the original image and by converting it into Y/Cb/Cr color space data if necessary.

10   26. An image processing method according to claim 23, further comprising an extracting step for extracting several quantization DCT coefficients from a low frequency component side on the basis of the quantization DCT coefficients selected by said 15   coefficient selecting step.

27. An image processing method according to claim 23, wherein the image is a still image or a frame image having moving image data, and said selecting step 20   selects the number of quantization DCT coefficients in accordance with the fact that the original image is the still image or the fact that the original image is the frame image having moving image data.

25   28. An image processing method according to claim 23, wherein the quantization DCT coefficients of Y/Cb/Cr components are re-arranged by zigzag scanning,

and, when the original image is a still image, six
quantization DCT coefficients of Y/Cb/Cr components are
selected, respectively, from a low frequency component
side, and, when the original image is a moving image,

5   six quantization DCT coefficients of a Y component are
selected and three quantization DCT coefficients of
Cb/Cr components are selected, respectively, from a low
frequency component side.

10   29.   An image processing method according to claim
23, further comprising an image inputting step capable
of inputting both still image data and moving image
data, and a judging step for judging whether the image
inputted in accordance with an image input mode is a

15   still image or a frame image having the moving image
data.

       30.   An image processing method according to claim
29, wherein MINE TYPE of data including the original

20   image judges whether the original image has still image
data or moving image data.

       31.   An image processing method according to claim
29, wherein extension of a file number of data

25   including the original image judges whether the
original image has still image data or moving image
data.

32. An image processing method according to claim 23, wherein two candidates are prepared as the number of quantization DCT coefficients in said selecting step, and one is selected among them, and similarity

5   between first image characteristic amount data associated with the smaller number of quantization DCT coefficients and second image characteristic amount data associated with the greater number of quantization DCT coefficients is judged, and one of the first image

10   characteristic amount data and the second image characteristic amount data associated with the greater number of quantization DCT coefficients is selected in accordance with a comparison result between a similarity value and a predetermined threshold value.

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33. An image processing method according to claim 32, wherein, when the similarity between the first image characteristic amount data and the second image characteristic amount data is judged, judgement of

20   similarity is effected by supplementing a predetermined value as data of a coefficient portion which is not included in the first image characteristic amount data having smaller number of coefficients but is included in the second image characteristic amount data having

25   greater number of coefficients to the first image characteristic amount data.

34. An image processing method according to claim 33, wherein the predetermined value is 16 which is the number of quantization DCT coefficients.

5   35. An image processing method according to claim 33, wherein the predetermined value is a value which means that the DCT coefficient is zero.

36. A storing medium comprising:

10   a program code for a first extracting step for extracting a first image characteristic amount from an image;

a program code for a second extracting step for extracting a second image characteristic amount from

15   said image;

a program code for a judging step for judging similarity between the first image characteristic amount extracted by said first extracting step and the second image characteristic amount extracted by said

20   second extracting step; and

a program code for selecting step for selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result

25   of said judging step.

37. A storing medium comprising:

a program code for a DCT processing step for

effecting DCT processing of an image;

a program code for a quantization step for

effecting quantization of data subjected to the DCT

5 processing by said DCT processing step;

a program code for a coefficient selecting step

for selecting the number of quantization DCT

coefficients to be extracted among the quantization DCT

coefficients subjected to the quantization by said

10 quantization step, in accordance with an original

image; and

a program code for a setting step for setting the

number of quantization DCT coefficients selected by

said coefficient selecting step as an image

15 characteristic amount.

38. In a computer data signal adapted to extract

an image characteristic amount and to represent command

sequence carried out by an image processing method for

20 applying the characteristic amount to an image and

incorporated into a conveying wave, said image

processing method comprising:

a first extracting step for extracting a first

characteristic amount from an image;

25 a second extracting step for extracting a second

image characteristic amount from said image;

a judging step for judging similarity between the

first image characteristic amount extracted by said first extracting step and the second image characteristic amount extracted by said second extracting step; and

5   a selecting step for selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result of said judging step.

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39.   In a computer data signal adapted to extract an image characteristic amount and to represent command sequence carried out by an image processing method for applying the characteristic amount to an image and

15   incorporated into a conveying wave, said image processing method comprising:

a DCT processing step for effecting DCT processing of an image;

a quantization step for effecting quantization of

20   data subjected to the DCT processing by said DCT processing step;

a coefficient selecting step for selecting the number of quantization DCT coefficients to be extracted among the quantization DCT coefficients subjected to

25   the quantization by said quantization step, in accordance with an original image; and

a setting step for setting the number of

quantization DCT coefficients selected by said
coefficient selecting step as an image characteristic
amount.